

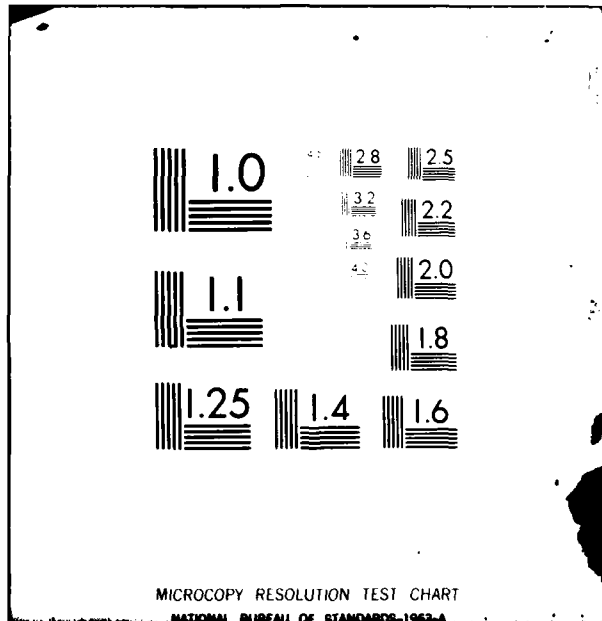
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**NAVY PERSONNEL RESEARCH  
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NPRDC Special Report 82-9

December 1981

**POSTENLISTMENT MENTAL QUALIFICATION VERIFICATION:  
CALENDAR YEAR 1979**

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The mental qualifications of entering recruits were verified by retesting approximately 10,000 recruits who had been first tested in Calendar Year 1979, prior to entering the Navy. On retesting, there was a small but significant drop of scores on the Armed Services Vocational Aptitude Battery (ASVAB) subtests used primarily for selection and classification. Unusually large discrepancies for some Armed Forces Examining and Entrance Stations and Navy Recruiting Districts indicated that some test compromise may exist. Furthermore, the norms for ASVAB Forms 5, 6, and 7 were not comparable.		

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## FOREWORD

This study was conducted in response to BUPERS Instruction 1130.24 of 15 March 1977, which directs that the accuracy of mental test scores, medical examinations, educational attainments, and moral information recorded for Navy enlistees during their enlistment processing be verified. This Center is charged with verifying the mental test scores.

This report, the third in a series to result from this effort, summarizes the findings obtained during Calendar Year 1979. Previous reports presented data obtained during the first 3 months and during the first year of retesting (NPRDC SRs 78-6 and 79-19).

The work of classification and testing personnel of the three Naval Training Centers is gratefully acknowledged. Without their help, this effort would have been much more difficult.

JAMES F. KELLY, JR.  
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## **SUMMARY**

### **Problem**

Bureau of Naval Personnel Instruction 1130.24 of 15 March 1977 established a program to verify the accuracy of mental test scores, educational attainment, medical examinations, and moral information recorded for nonprior-service Navy enlistees during their enlistment processing. The Navy Personnel Research and Development Center (NAVPERSRANDCEN) was asked to verify the mental qualification portion of the records.

### **Objectives**

The objective of this study is to provide continuing verification of the accuracy of mental test scores obtained during enlistment processing.

### **Approach**

Approximately 10,000 recruits who entered military service in 1979 were retested on a form of the Armed Services Vocational Aptitude Battery (ASVAB) other than the one used during accession processing. Scores on both initial and retest forms were reported to NAVPERSRANDCEN. Initial test scores and retest scores were compared by sex, by recruiting source, and by form of ASVAB used for initial test and retest.

### **Findings**

Average scores on the ASVAB subtests used primarily for selection and classification (WK, AR, EI, and GS) decreased on retest. Since this change was slightly more than regression effects alone would be expected to produce, it appears that some initial test scores had been artificially inflated. Comparison of test and retest scores by recruiting source (NRD and AFEES) has identified some sources where unusual discrepancies exist.

The finding that differences between test and retest scores varied for different forms of the ASVAB is consistent with findings of earlier reports in this series and suggests that the norms for ASVAB Forms 5, 6, and 7 are not equivalent.

### **Conclusions**

While there is no indication of major manipulation or error in initial testing overall, there is evidence of discrepancies in specific areas (e.g., recruiting source or form of ASVAB).

### **Recommendations**

1. The AFQT percentile and Navy standard score conversion tables for ASVAB Forms 5, 6, and 7 do not appear to be comparable. Therefore, if these forms are again considered for operational use, their conversion tables should be revised.

2. The ASVAB retesting program should be continued for the new Forms 8, 9, and 10. These forms should be compared with earlier forms (ASVAB 5, 6, and 7) and the accuracy of their AFQT percentiles should be monitored. The ASVAB retesting program should also review test results at the various recruiting stations for possible aberrations if future results continue to demonstrate discrepancies or test compromise.

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## INTRODUCTION

### Problem

Bureau of Naval Personnel Instruction 1130.24 of 15 March 1977 established a program to verify the accuracy of mental test scores, educational attainment, medical examinations, and moral information recorded for nonprior-service enlistees during their initial processing. In this instruction, the Navy Personnel Research and Development Center (NAVPERSRANDCEN) was directed to verify the mental qualification portion of the program. This procedure basically involves (1) retesting samples of recruits at Naval Training Centers (NTCs), San Diego, California, Great Lakes, Illinois, and Orlando, Florida with a form of the expanded Armed Services Vocational Aptitude Battery (ASVAB) other than the one used for initial testing, and (2) analyzing discrepancies between initial test scores and retest scores. This analysis should reveal whether initial test scores have been artificially inflated by faulty testing procedures, "coaching" the tests, compromise, or other aberrations.

### Purpose

The purpose of this effort was to provide continuing verification of the accuracy of mental test scores of recruits obtained during enlistment processing. This is the third report in the series associated with the program. Previous reports presented data obtained during the first 3 months and during the first year of retesting.<sup>1,2</sup>

### Background

The ASVAB was first developed in the 1960s as a military aptitude test for high school students. It was hoped that the ASVAB would be useful as a common-service test, replacing the separate testing batteries then in use at recruiting stations or recruit training depots. However, the early forms of the ASVAB (Forms 1 through 4) were unsuitable for joint-service testing, because they did not include tests for all the aptitudes for which the military services require assessments. This deficiency led to the development of the expanded ASVAB (Forms 5, 6, 7), which includes 12 component tests that cover all the types of aptitude measures needed by the various services. The 12 component tests are:

1. General Information (GI)
2. Numerical Operations (NO)
3. Attention to Detail (AD)
4. Word Knowledge (WK)
5. Arithmetic Reasoning (AR)
6. Space Perception (SP)
7. Mathematics Knowledge (MK)
8. Electronics Information (EI)
9. Mechanical Comprehension (MC)
10. General Science (physical and biological) (GS)
11. Shop Information (SI)
12. Automotive Information (AI)

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<sup>1</sup>Hodges, C. I. Postenlistment mental qualification verification (NPRDC SR 78-6). San Diego, CA: Navy Personnel Research and Development Center, February 1978.

<sup>2</sup>Hodges, C. I. Postenlistment mental qualification verification: The first year of retesting (NPRDC SR 79-19). San Diego, CA: Navy Personnel Research and Development Center, May 1979.

ASVAB Forms 5, 6, and 7 cover the same information and are at the same level of difficulty. During the period of this report, Form 5 was generally administered to potential applicants at high schools; and Forms 6 and 7, at Armed Forces Examining and Entrance Stations (AFEES) or by mobile testing teams.

## APPROACH

### Procedure

Beginning in April 1977, about 20 percent of the recruits entering each NTC were retested on a form of the ASVAB other than that used for initial testing. Since April 1979, this retesting requirement has been changed to 880 recruits each quarter at each NTC. The retesting is conducted during the first week of training. During the period of this report, ASVAB Forms 6 and 7 were used for retesting at NTCs Great Lakes and Orlando; and Form 5, at NTC San Diego.

### Sample

The sample for the present report comprises 10,747 recruits tested initially during 1979. The distribution of this sample by sex and initial test form is presented in Table 1.

Table 1

Sample Distribution by Initial Test Form

Initial Test Form	Sample		Total
	Male	Female	
5	283	0	283
6	4550	796	5346
7	4440	678	5118
Total	9273	1474	10747

### Analysis

Analysis consisted of comparing initial test scores and retest scores. Comparisons were made by sex, by recruiting source, and by form of ASVAB used for initial tests and retests.

## RESULTS

### ASVAB Subtests

Table 2<sup>3</sup> presents initial and retest raw and Navy Standard Score (NSS) means obtained by sample members on the ASVAB subtests. The Navy Standard Scores were obtained from the subtest raw scores by using the existing Navy conversion tables, which are presented in the appendix.

Numbers in the "Difference" columns in Table 2 were derived by subtracting the retest scores from the initial test scores; thus, positive numbers indicate that the initial test scores were higher than the retest scores.

In the total sample, positive raw score mean differences were found on the WK, AR, and SP subtests, which comprise the Armed Forces Qualification Test (AFQT) composite, as well as on the EI and GS subtests, which play an important role in selection for electronic schools. Raw score mean differences for the remaining subtests were all negative. This pattern of positive and negative subtest difference confirms the pattern found by Hodges in 1979.

Predicted retest mean scores were developed for subtests having positive differences. Developing these predicted scores required the ASVAB subtest means from an unselected sample. These means were estimated from data for an applicant sample (18,483 males and 5,037 females) that was gathered in November 1979. The predicted scores also require the reliabilities of the subtests. Since these were not known, an estimate of .85 (a typical reliability for aptitude subtests of this type) was used as the test-retest reliability for all subtests. The predicted retest means are presented in Table 3, along with the initial test and the retest means. As shown, the retest means were lower than the predicted retest means for WK, AR, and GS in all three samples, for EI in the total and male samples only, and for SP and AI in the female sample only. These differences could be considered a result of regression if the subtest reliabilities had been somewhat lower than the estimate of .85. The reliabilities necessary to produce the retest difference actually obtained have been calculated and are presented in Table 3.

The low estimated reliabilities for AR in all three samples, for EI and GS in the total and male samples, and for SP in the female sample tend to cast some suspicion on these tests. The low retest means for these tests cannot be explained easily in terms of regression effects. On the other hand, WK is the test that is most susceptible to coaching, and the results for WK suggest that coaching probably did not occur.

### AFQT Score Means and Mental Group Percentages

Table 4 presents mean AFQT raw scores (derived by averaging the sums of raw scores obtained on the WK, AR, and SP subtests) for the three samples on initial test, predicted retest, and actual retest. The estimated means for an unselected sample were derived from data for the applicant sample of 18,483 males and 5,037 females that was gathered in November 1979. An estimate of .86 was used as the test-retest reliability for the AFQT.

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<sup>3</sup>Because of the large number of tables included in this section relative to the amount of text, the tables are provided at the end of the section, commencing on page 7.

The differences between initial and retest means are positive for all samples, particularly for the female sample, where greater selectivity is exercised in accepting applicants. The positive differences between the predicted and retest scores indicate that the drop in scores on retest cannot be explained entirely on the basis of selection.

There are six AFQT mental level groups: 1, 2, Upper 3, Lower 3, 4, and 5. Recruits who are assigned to groups 1, 2, and Upper 3 based on their AFQT score are considered "school-eligible"; that is, they may be assigned to Navy Class "A" Schools. Cross tabulations of mental group percentages in the total, male, and female samples are presented in Table 5.

Table 6 presents AFQT mental group percentage distributions for the three samples on initial test and retest and indicates the percentages of recruits who are school-eligible. As shown, for all samples, there is an increase in the number of recruits in mental groups 1, Lower 3, 4, and 5 on retest. There is a tendency for the number of persons in mental groups Lower 3, 4, and 5 to increase on retest because they were initially selected based on the AFQT standard; however, there is no immediate explanation for the increase of those in mental group 1. (This increase was also found by Hodges in 1979.) Table 6 also shows that the percentage of school-eligible males decreased by 5.63 percent on retest, compared to 9.50 percent for females. This finding reflects the greater selectivity used in accepting female recruits.

A primary concern is the effect of retest results on the number of recruits meeting the selection point for the Navy (the 21st percentile on the AFQT). Table 7 provides cross tabulations of the percentage of recruits who meet that selection point on initial and retests.

When persons are selected above a given cut point, a small percentage of them are expected to fall below that point on retest. Assuming 80 to 90 percent as a plausible estimate of the proportion of applicants who would be acceptable on initial test scores, a proportion—up to an estimated 4 percent—could be expected to fall below the selection point on retest. Thus, the total percentages shown in Table 7 are not excessive.

#### School and Occupational Area Selection Standards

The various standard score composite selection standards for Class "A" school assignment or occupational area guarantee are listed below.

<u>Identifying Number</u>	<u>Selection Standard</u>
1	WK+AR=96
2	WK+AR=100
3	WK+AR=105
4	WK+AR=110
5	WK+AR=115
6	WK+MC=96
7	AR+SI=101
8	WK+NO+AR+AD=206
9	WK+NO+AD=163
10	WK+MC+MK+EI+GS=258
11	WK+MC+SI=150
12	WK+MC+SI=156
13	WK+MC+SI=163

14	AR+MK+EI+GS=193
15	AR+MK+EI+GS=201
16	AR+MK+EI+GS=212
17	AR+MC=96
18	MK+EI+GS=163 + AR+MK+EI+GS=225
19	AR+MK+EI+GS=208 or WK+MC+SI=163 or WK+AR=110
20	WK+AR=115 + WK+MC+SI=147 + MK+EI+GS=163 + AR+MK+AR=225
21	WK+AR=115 + MK+MC+SI=163
22	WK+AR=115 + WK+MC+SI=156 + MK+EI+GS=163 + AR+MK+EI+GS=225
23	WK+AR=115 + MK+EI+GS=163 + AR+MK+EI+GS=225

Table 8 shows the percentage of the samples meeting selection standards on initial and retest administrations. Although there is some reduction in the percentage meeting the selector standard on retest for most of the standards, the differences are small and are not considered excessive. Averaged across all standards, there is a decrease of about 2.5 percent in females meeting the standard, while for males there is a very slight increase.

Table 9 shows that about 55 percent of the males and 48 percent of the females qualified for a school assignment or occupational specialty based on initial test scores. This is 5 to 10 percent less than reported by Hodges in 1979. About 76 percent of the males and 71 percent of the females qualified on retest, somewhat less than the 80 percent normally expected. However, the expected percentage that qualify on retesting varies according to the selection standard used, making it difficult to interpret any overall discrepancies.

#### Analyses by Recruiting Source

It is postulated that discrepancies between initial and retest scores could result from such factors as regression, reduced motivation on retest, or chance. These factors should operate similarly for persons from all recruiting sources; that is, Naval Recruiting Districts (NRDs) or Armed Forces Examining and Entrance Stations (AFEESs). To test this hypothesis, analyses of test results were conducted separately for recruiting sources from which a minimum of 160 male recruits were initially tested on ASVAB Form 6 or 7. This criterion was met by 26 NRDs and 19 AFEESs, which accounted for 73 and 53 percent respectively of males initially tested on Forms 6 or 7.

Table 10 presents the differences between initial and retest Navy Standard Score (NSS) means obtained by sample members on each subtest, the total of all subtests, and the AFQT percentile. Table 11 shows the percentages of recruits who initially qualified on the AFQT standard (the 21st percentile), or the school or occupational guarantee standard, but not on retest. In these tables, the recruiting sources are not identified by location; rather, they are identified by an alphabetic code assigned arbitrarily.

Table 11 indicates that the overall average "loss" rates for sample members who initially qualified under AFQT or school standards are 3.2 and 23.5 percent respectively. The loss rates for the individual recruiting sources were compared to the overall rates, using a one-tailed test of significance of differences in proportions. Loss rates for NRDs and AFEESs with significantly higher loss rates than overall are indicated by asterisks in Table 11.

### Analysis by Form of Initial Test

Table 12 compares the initial and retest raw score means by initial test form given to sample members; and Table 13, the initial and retest standard scores obtained by initial test form. It is assumed that converting raw scores to standard scores should cancel out much of the difference in difficulty level between test forms, as well as provide control for differential subtest length.

When Form 5 or 6 is given initially, Form 7 is used at the NTCs for retesting. When Form 7 is given initially, Form 6 is used. Thus, in Tables 12 and 13, positive differences in Form 7 means suggest that it is more "difficult" than the other forms, while negative differences suggest that Form 7 is "easier" than other forms. Table 12 suggests that Form 7 is less "difficult" than Forms 5 or 6 on the AFQT percentile; and Table 13, that Form 7 is slightly more "difficult" on standard score determinations. Hodges (1979) made the same findings.

Table 14 compares the percentage of recruits who qualified initially for school but did not qualify on retest across the three test forms. These results also indicate that Form 7 is more "difficult" than Forms 5 and 6. Only 52 percent of male recruits initially tested on Form 7 met the school guarantee standard, compared to 74 and 58 percent of those tested on Forms 5 and 6. This finding suggests that the AFQT percentile tables, the Navy Standard Score conversion tables, or both, may be faulty.

**Table 2**  
**Comparison of Initial Test and Retest Raw Score**  
**and Navy Standard Score (NSS) Means**

ASVAB Subtest	Raw Score Means			NSS Means		
	Initial Test	Retest	Diff. (I-R)	Initial Test	Retest	Diff. (I-R)
Total Sample (N = 10747)						
GI	9.6	9.7	-0.1	51.1	50.9	+0.2
NO	32.9	34.8	-1.9	51.1	52.9	-1.8
AD	14.9	15.5	-0.6	50.6	52.2	-1.6
WK	20.9	20.4	+0.5	53.8	53.2	+0.6
AR	13.1	12.7	+0.4	52.2	51.7	+0.5
SP	13.5	13.4	+0.1	54.1	53.9	+0.2
MK	12.1	12.1	0.0	53.1	52.8	+0.3
EI	19.6	19.3	+0.3	53.4	52.9	+0.5
MC	10.9	11.2	-0.3	50.7	51.5	-0.8
GS	11.6	11.4	+0.2	52.9	52.2	+0.7
SI	13.7	13.8	-0.1	51.7	52.0	-0.3
AI	11.3	11.5	-0.2	51.0	51.2	-0.2
Total	184.0	185.6	-1.6	625.6	627.5	-1.9
Male Sample (N = 9273)						
GI	10.0	10.0	0.0	52.0	51.9	+0.1
NO	32.3	34.3	-2.0	50.5	52.4	-1.9
AD	14.6	15.3	-0.7	50.1	51.9	-1.8
WK	20.6	20.2	+0.4	53.4	52.9	+0.5
AR	13.1	12.7	+0.4	52.2	51.9	+0.3
SP	13.5	13.5	0.0	54.2	54.1	+0.1
MK	12.0	12.0	0.0	52.8	52.6	+0.2
EI	20.1	19.7	+0.4	54.2	53.6	+0.6
MC	11.2	11.6	-0.4	51.4	52.3	-0.9
GS	11.6	11.4	+0.2	52.9	52.1	+0.8
SI	14.3	14.4	-0.1	52.9	53.2	-0.3
AI	11.9	12.1	-0.2	52.2	52.5	-0.3
Total	185.2	187.1	-1.9	628.9	631.5	-2.6
Female Sample (N = 1474)						
GI	7.5	7.6	-0.1	45.0	45.0	0.0
NO	37.0	38.2	-1.2	54.6	55.7	-1.1
AD	16.2	16.4	-0.2	53.8	54.1	-0.3
WK	22.6	22.0	+0.6	55.9	55.2	+0.7
AR	12.9	12.5	+0.4	51.9	51.1	+0.8
SP	13.1	13.0	+0.1	53.4	52.7	+0.7
MK	12.9	12.8	+0.1	54.6	54.4	+0.2
EI	16.3	16.2	+0.1	48.3	48.0	+0.3
MC	8.9	8.8	+0.1	46.6	46.5	+0.1
GS	11.5	11.3	+0.2	52.7	52.3	+0.4
SI	9.9	9.8	+0.1	44.0	43.8	+0.2
AI	7.5	7.4	+0.1	43.8	43.5	+0.3
Total	176.3	176.0	+0.3	604.7	602.4	+2.3



Table 3

Raw Score Means for Initial Test, Predicted Retest,  
and Actual Retest for ASVAB Subtests Having Positive Differences

Subtest	Means			Estimated <sup>a</sup> Reliability	Differences	
	Initial Test (I)	Predicted Retest (P)	Retest (R)		I-R	P-R
Total Sample (N = 10747)						
WK	20.906	20.565	20.423	.788	.483	.142
AR	13.056	12.879	12.700	.699	.356	.179
SP	13.464	13.371	13.387	.876	.077	-.016
MK	12.083	11.942	12.076	.993	.007	-.134
EI	19.615	19.406	19.263	.747	.352	.143
GS	11.596	11.459	11.350	.731	.246	.109
Male Sample (N = 9273)						
WK	20.633	20.285	20.165	.798	.468	.120
AR	13.079	12.904	12.735	.704	.344	.169
SP	13.514	13.424	13.456	.904	.058	-.032
EI	20.141	19.960	19.743	.670	.398	.217
GS	11.615	11.480	11.358	.715	.257	.122
Female Sample (N = 1474)						
WK	22.607	22.186	22.043	.799	.564	.143
AR	12.909	12.732	12.477	.637	.432	.255
SP	13.149	13.067	12.951	.640	.198	.116
MK	12.860	12.696	12.767	.915	.093	-.071
EI	16.307	16.203	16.242	.906	.065	-.039
MC	8.892	8.789	8.841	.926	.051	-.052
GS	11.465	11.332	11.295	.809	.170	.037
SI	9.862	9.766	9.782	.875	.080	-.016
AI	7.506	7.434	7.370	.717	.136	.064

<sup>a</sup>These reliabilities would make the predicted drop in mean test score equal to the actual drop in mean test score.

Table 4  
Mean AFQT Raw Scores

Sample	N	Means			Differences	
		Initial Test (I)	Predicted Retest (P)	Retest (R)	I-R	P-R
Total	10747	47.425	46.855	46.511	.914	.344
Male	9273	47.226	46.654	46.357	.869	.297
Female	1474	48.665	48.029	47.472	1.193	.557

Table 5  
Cross Tabulations of Mental Group Percentages

Initial Test Mental Group	Retest Mental Group						Initial Test Total
	1	2	U <sub>3</sub>	L <sub>3</sub>	4	5	
Total Sample (N = 10747)							
1	3.0	1.6	0.1	0.0	---	---	4.7
2	2.4	18.7	6.7	0.7	0.1	0.1	28.7
Upper 3	0.1	6.6	22.1	10.4	0.6	0.1	40.0
Lower 3	0.0	0.4	5.5	14.3	3.2	0.4	23.8
4	---	---	0.1	1.5	1.0	0.2	2.8
5	---	---	---	---	---	---	0.0
Retest Total	5.5	27.3	34.5	26.9	4.9	0.9	100.0
Male Sample (N = 9273)							
1	3.1	1.6	0.1	0.0	---	---	4.8
2	2.4	18.3	6.5	0.7	0.1	0.2	28.1
Upper 3	0.1	6.5	21.8	10.0	0.6	0.2	39.2
Lower 3	0.1	0.4	5.5	14.9	3.4	0.4	24.8
4	---	---	0.1	1.7	1.1	0.3	3.0
5	---	---	---	---	---	---	0.0
Retest Total	5.6	26.9	34.0	27.3	5.3	1.0	100.0
Female Sample (N = 1474)							
1	2.2	1.8	0.1	---	---	---	4.1
2	2.6	21.0	8.1	0.7	---	---	32.5
Upper 3	---	7.3	23.9	13.0	0.7	0.1	45.0
Lower 3	---	0.2	5.0	10.7	1.9	0.1	17.9
4	---	---	0.1	0.2	0.1	---	0.4
5	---	---	---	---	---	---	0.0
Retest Total	4.9	30.3	37.2	24.6	2.8	0.3	100.0

Note. As a result of rounding, the sums of columns and rows may differ slightly from the percentage totals shown in this table.

Table 6  
AFQT Mental Group Percentage Distribution

Mental Group	Total Sample (N = 10747)			Male Sample (N = 9273)			Female Sample (N = 1474)		
	Initial Test	Retest	Diff. (I-R)	Initial Test	Retest	Diff. (I-R)	Initial Test	Retest	Diff. (I-R)
1	4.70	5.46	-0.76	4.79	5.56	-0.77	4.14	4.88	-0.74
2	28.68	27.34	+1.34	28.07	26.87	+1.20	32.50	30.33	+2.17
Upper 3	40.03	34.45	+5.58	39.21	34.01	+5.20	45.05	37.18	+7.87
Lower 3	23.83	26.91	-3.08	24.79	27.28	-2.49	17.91	24.56	-6.65
4	2.76	4.94	-2.18	3.14	5.29	-2.15	0.40	2.78	-2.38
5	0.00	0.90	-0.90	0.00	0.97	-0.97	0.00	0.27	-0.27
Total	100.00	100.00		100.00	99.98		100.00	100.00	
-----									
School Eligible (MG 1, 2, U <sub>3</sub> )									
	73.41	67.25	+6.16	72.07	66.44	+5.63	81.69	72.39	+9.50

Table 7  
Cross Tabulations of Percentage of Recruits Meeting  
Selection Point--Initial vs. Retest Scores

Initial Test Score	Retest Score		Total
	21 and above	20 or less	
Total Sample (N = 10747)			
21 and above	97.1	2.9	99.9
20 or less	0.1	0.0	0.1
Total	97.1	2.9	100.0
Male Sample (N = 9273)			
21 and above	96.8	3.2	99.9
20 or less	0.1	0.0	0.1
Total	96.8	3.2	100.0
Female Sample (N = 1474)			
21 and above	98.5	1.5	100.0
20 or less	0.0	0.0	0.0
Total	98.5	1.5	100.0

**Note.** As a result of rounding, the sums of columns and rows may differ slightly from the totals shown in this table.

Table 8  
Percentages Meeting Selection Standards

Selection Standard Number	Total Sample (N = 10747)		Male Sample (N = 9273)		Female Sample (N = 1474)	
	Initial Test	Retest	Initial Test	Retest	Initial Test	Retest
1	81.8	76.6	80.3	75.8	90.9	81.2
2	71.3	65.5	69.8	64.7	80.0	70.8
3	53.6	51.4	52.7	50.8	59.2	54.8
4	36.5	36.3	35.8	36.0	40.0	38.3
5	23.0	24.2	22.9	24.1	24.2	24.7
6	77.4	76.3	77.9	77.1	73.7	70.9
7	60.3	59.8	65.0	64.5	30.9	30.6
8	53.6	58.1	50.7	56.2	71.9	70.2
9	33.0	42.0	29.4	39.5	55.8	57.7
10	56.7	55.5	58.2	56.9	47.4	46.2
11	64.2	65.8	67.9	69.8	40.8	40.5
12	50.8	53.3	54.7	57.7	25.8	25.6
13	35.5	38.5	39.0	42.5	13.7	13.0
14	78.8	75.1	79.1	75.3	76.6	73.9
15	66.6	63.6	67.4	64.5	63.4	57.5
16	48.3	46.0	49.3	47.3	38.9	37.7
17	71.2	71.1	73.2	73.7	58.1	54.6
Average	56.6	56.4	57.3	57.4	52.4	49.9

**Note.** Selection standards are identified on pages 4 and 5. Those that contain two or more composites (Nos. 18 through 23) are not included in this table. They are included in Table 9.

Recruits Qualifying for School Assignment  
or Occupational Specialty

Selection Standard Number	Recruits Qualifying on Initial Test (N)	Recruits Qualifying on Retest (N)	(%)	Recruits not Qualifying on Retest (N)	(%)
Total Sample (N = 10747)					
1	55	24	43.6	31	56.4
2	597	419	70.2	178	29.8
3	661	472	71.4	189	28.6
4	400	309	77.2	91	22.7
5	223	157	70.4	66	29.6
6	52	40	76.9	12	23.1
7	17	15	88.2	2	11.8
8	128	82	64.1	46	35.9
9	1143	889	77.8	254	22.2
10	32	24	75.0	8	25.0
11	424	359	84.7	65	15.3
12	1119	888	79.4	231	20.6
13	17	9	52.9	8	47.1
14	199	143	71.9	56	28.1
15	102	62	60.8	40	39.2
16	249	183	73.5	66	26.5
17	49	32	65.3	17	34.4
18 <sup>a</sup>	0	—	—	—	—
19	328	284	86.6	44	13.4
20	14	13	92.9	1	7.1
21	5	3	60.0	2	40.0
22	28	22	78.6	6	21.4
23	40	26	65.0	14	35.0
Total	5882	4455	75.7	1427	24.3
	(54.7% of sample)				
Male Sample (N = 9273)					
1	52	24	46.2	28	53.8
2	408	281	68.9	127	31.1
3	509	364	71.5	145	28.5
4	308	241	78.2	67	21.8
5	212	154	72.6	58	27.4
6	49	37	75.5	12	24.5
7	13	11	84.6	2	15.4
8	79	50	63.3	29	36.7
9	1050	827	78.8	223	21.2
10	16	13	81.2	3	18.8
11	411	350	85.2	61	14.8
12	1071	852	79.6	219	20.4
13	15	9	60.0	6	40.0
14	192	138	71.9	54	28.1
15	101	62	61.4	39	38.6
16	243	178	73.3	65	26.7
17	47	31	66.0	16	34.0
19	304	263	86.5	41	13.5
20	11	10	90.9	1	9.1
21	5	3	60.0	2	40.0
22	28	22	78.6	6	21.4
23	40	26	65.0	14	35.0
Total	5164	3946	76.4	1218	23.6
	(55.7% of sample)				
Female Sample (N = 1474)					
1	3	3	100.0	0	0.0
2	189	138	73.0	51	27.0
3	152	108	71.1	44	28.9
4	91	68	74.7	23	25.3
5	11	3	27.3	8	72.7
6	3	3	100.0	0	0.0
7	4	4	100.0	0	0.0
8	49	32	65.3	17	34.7
9	93	62	66.7	31	33.3
10	16	11	68.8	5	31.2
11	13	9	69.2	4	30.8
12	45	34	75.6	11	24.4
13	2	0	0.0	2	100.0
14	7	5	71.4	2	28.6
15	1	0	0.0	1	100.0
16	6	5	83.3	1	16.7
17	2	1	50.0	1	50.0
19	24	21	87.5	3	12.5
20	3	3	100.0	0	0.0
21	0	—	—	—	—
22	0	—	—	—	—
23	0	—	—	—	—
Total	714	510	71.4	204	28.6
	(48.4% of sample)				

<sup>a</sup>Selection standards are identified on pages 4 and 5. Although Number 18 was not used during the period of this report, it has been retained for comparability with earlier reports in this series (Hodges, 1978, 1979).

Table 10

Difference Between Initial and Retest (I-R)  
Navy Standard Score Means by Recruiting Source

Item	Subtest Standard Score Mean Differences (I-R)												Subtest Total	AFQT Percentile
	GI	NO	AD	WK	AR	SP	MK	EI	MC	GS	SI	AI		
By Naval Recruiting District														
A	-0.4	-1.3	-1.7	0.4	-0.1	0.2	-0.4	0.1	-0.5	0.2	-0.3	-1.1	-5.0	0.6
B	-0.2	-2.6	-3.9	0.0	0.2	-0.4	0.1	0.2	-1.0	-0.2	-0.5	-0.5	-8.9	-0.0
C	1.5	-2.6	-2.8	0.7	0.3	0.4	-0.0	1.1	-1.8	2.2	-0.1	0.3	-0.9	3.8
D	-1.2	-2.5	-2.3	0.5	0.6	0.4	0.2	0.7	-1.2	0.6	0.3	0.5	-3.4	1.4
E	-0.3	-2.3	-1.9	0.0	0.0	-0.3	0.7	0.0	-0.2	0.6	-0.8	-0.8	-5.3	-0.3
F	-0.6	-2.2	-2.1	0.3	0.7	0.0	0.4	0.1	-0.8	-0.3	-0.9	-0.1	-5.6	0.6
G	1.9	-3.1	-4.8	-0.4	-0.0	-0.5	0.5	1.8	-1.6	2.6	-0.4	0.2	-3.9	1.4
H	-0.7	-1.6	-2.2	-0.0	0.4	0.3	0.2	0.2	-0.6	-0.4	-0.3	0.1	-4.6	0.7
I	1.4	-2.8	-3.4	0.2	1.0	0.4	0.6	1.1	-1.4	2.4	-0.0	0.2	-0.3	3.7
J	-0.3	-1.7	-2.4	0.8	0.5	-0.2	0.8	0.4	0.2	0.4	-0.5	-0.2	-2.2	1.4
K	0.3	-1.2	-0.8	0.5	0.2	0.3	-0.2	1.0	-0.2	0.9	-0.1	-0.4	0.3	1.0
L	-1.3	-3.4	-3.2	0.1	-1.0	-0.6	-0.3	0.1	-1.8	0.5	0.1	-0.7	-11.5	-1.4
M	-0.4	-1.8	-2.8	0.4	-0.3	0.3	0.1	0.3	-0.7	0.0	-0.4	-0.4	-5.6	0.7
N	0.1	-1.1	-0.4	0.7	0.6	0.9	0.6	0.8	-0.9	0.6	0.4	-0.1	2.3	2.2
O	-0.5	-0.8	-1.0	0.4	0.9	1.0	0.9	1.1	-0.5	0.8	-0.6	0.1	1.8	2.8
P	-0.5	-0.9	-1.2	1.6	0.1	0.6	0.1	0.6	-1.2	0.6	-1.2	-0.3	-2.0	3.0
Q	1.1	-1.8	-2.6	0.2	0.5	-0.3	1.3	1.1	-2.1	3.7	-0.9	0.2	0.5	2.7
R	-0.6	-1.3	0.6	0.9	0.6	-0.5	0.4	0.8	-1.3	0.6	-0.3	-0.7	-0.9	1.4
S	1.1	-0.6	0.6	1.2	1.8	0.6	1.1	1.6	0.3	0.5	0.5	0.1	8.8	4.0
T	0.5	-1.8	-0.9	0.6	0.6	1.3	1.0	0.7	0.3	1.0	0.7	0.6	4.6	2.0
U	0.7	-0.8	-0.6	0.9	0.1	0.0	-0.3	0.6	-1.8	1.1	-0.5	-0.1	-0.8	1.8
V	0.2	-0.9	-0.1	0.7	-1.0	-0.5	-0.2	-0.2	-2.3	-1.0	-1.1	-0.3	-6.6	-0.4
W	0.4	-2.1	-1.8	0.6	0.1	-0.1	-0.0	0.4	-0.8	1.2	0.5	-0.4	-2.0	0.8
X	0.1	-2.3	-0.9	0.2	0.7	-0.5	-1.1	0.1	-1.7	0.9	0.2	-0.9	-5.2	0.1
Y	1.2	-1.6	-1.4	0.0	-0.8	-0.6	0.7	0.6	-1.8	2.0	0.1	-0.9	-2.5	1.7
Z	0.8	-1.4	-1.9	0.1	0.8	-0.2	0.5	-0.5	-1.4	1.6	-0.7	-0.1	-2.3	2.2
Other	0.5	-2.0	-1.6	0.7	0.6	0.7	0.4	0.6	-1.0	0.7	-0.3	-0.1	-0.7	2.7
By Armed Forces Examining and Entrance Station														
A	-0.4	-1.3	-1.7	0.4	-0.0	0.1	-0.5	0.1	-0.6	0.2	-0.3	-1.1	-5.0	0.6
B	-0.2	-2.6	-3.8	-0.0	0.2	-0.4	0.1	0.2	-1.0	-0.2	-0.5	-0.5	-8.8	-0.0
C	-1.2	-2.6	-2.4	0.6	0.5	0.4	0.1	0.7	-1.2	0.6	0.2	0.5	-3.8	1.4
D	-0.5	-2.3	-2.1	0.3	0.7	0.1	0.3	0.1	-0.9	-0.3	-0.8	-0.1	-5.5	0.7
E	-0.6	-1.1	-1.6	1.5	0.3	0.5	0.6	0.6	-1.0	0.1	-1.1	-0.4	-2.3	3.1
F	1.8	-2.5	-2.7	0.9	0.4	0.8	0.1	1.1	-2.0	3.1	-0.3	0.6	1.4	4.5
G	2.0	-3.1	-4.7	-0.5	0.1	-0.5	0.5	1.8	-1.7	2.6	-0.4	0.2	-3.7	1.4
H	-0.2	-3.1	-1.7	0.2	-0.3	0.1	1.1	-0.1	-0.6	0.2	-0.2	-0.9	-5.5	0.1
I	-1.2	-3.3	-3.3	0.1	-0.9	-0.6	-0.4	0.0	-1.9	0.5	0.1	-0.7	-11.4	-1.4
J	0.0	-1.2	-0.6	0.8	0.5	1.1	0.7	1.0	-0.8	0.6	0.4	-0.1	2.3	2.3
K	-0.4	-1.8	-2.7	0.4	-0.3	0.3	0.1	0.3	-0.7	0.0	-0.4	-0.4	-5.6	0.6
L	1.1	-0.6	0.6	1.3	1.8	0.7	1.1	1.4	0.3	0.6	0.5	-0.0	8.6	4.0
M	0.7	-1.0	-0.7	0.7	0.0	0.1	-0.4	0.5	-1.7	1.0	-0.3	-0.1	-1.0	1.7
N	0.0	-0.8	-0.2	0.7	-0.9	-0.5	-0.1	-0.3	-2.3	-1.1	-1.0	-0.3	-6.7	-0.4
O	0.4	-2.2	-1.8	0.6	0.1	-0.1	0.1	0.4	-0.7	1.3	0.4	-0.4	-1.7	0.9
P	-0.4	-1.4	1.8	1.1	0.8	0.2	0.2	0.5	-1.3	0.6	0.0	-0.5	1.5	2.4
Q	-1.0	-0.8	-0.9	0.0	0.7	0.6	0.7	0.8	-0.6	0.6	-0.4	-0.2	-0.4	2.0
R	-1.4	-1.0	-2.4	-0.1	0.2	0.3	0.4	0.1	-0.7	-0.1	0.6	0.3	-4.0	0.6
S	1.2	-1.5	-1.9	0.3	0.8	-0.3	0.4	-0.7	-1.8	-1.9	-0.8	-0.1	-2.4	2.4
Other	0.5	-1.9	-1.8	0.5	0.5	0.3	0.4	0.7	-0.9	1.0	-0.3	-0.1	-1.0	2.2

Percentage of Recruits Initially Qualified on AFQT  
or School Guarantee Standard but Not on Retest

Item	Percent Initially Qualified on AFQT Standard but Not on Retest	Percent Initially Qualified on School Guarantee Standard	Percent Initially Qualified on School Guarantee Standard but Not on Retest
By Naval Recruiting District			
A	3.6	61.8	21.8
B	2.3	48.5	26.4
C	6.3**	55.2	18.7
D	3.6	49.4	27.3
E	2.6	63.6	18.5
F	1.6	66.0	19.6
G	3.3	57.6	29.1*
H	1.8	53.6	18.8
I	2.9	47.1	23.4
J	3.9	62.5	21.6
K	3.1	46.7	27.7
L	2.9	49.0	20.2
M	1.7	42.9	22.2
N	1.6	53.1	15.7
O	4.1	54.1	28.6
P	4.1	50.5	27.9
Q	2.0	62.7	16.4
R	4.5	56.4	28.9
S	9.1**	60.3	36.7**
T	4.1	51.0	38.4**
U	3.6	51.0	25.5
V	1.1	61.7	20.4
W	1.6	60.3	18.9
X	2.8	53.1	28.4
Y	0.6	62.6	19.6
Z	2.3	49.4	27.6
Average (A-Z)	3.2	55.1	23.6
Other	3.2	55.2	23.0
Overall Average	3.2	55.7	23.5
By Armed Forces Examining and Entrance Station			
A	3.6	61.4	21.9
B	2.3	48.5	26.3
C	3.5	48.7	26.9
D	1.6	65.5	19.5
E	3.9	52.1	27.0
F	3.9	57.7	18.2
G	3.3	57.6	28.0
H	2.4	61.5	20.6
I	2.8	48.4	20.2
J	2.5	53.4	15.2
K	1.7	43.3	22.0
L	9.0**	60.5	34.4**
M	3.2	51.6	24.5
N	1.6	61.4	20.6
O	2.2	60.2	18.8
P	5.1	59.1	31.7*
Q	3.5	56.6	24.5
R	1.8	50.6	24.7
S	1.9	47.8	27.3
Average (A-S)	3.1	55.0	23.6
Other	3.3	55.2	23.3
Overall Average	3.2	55.7	23.5

\*p < .05

\*\*p < .01

Table 12

Comparison of Initial Test and Retest Raw Score Means by Initial Test Form

ASVAB Subtest	Form 5 Means			Form 6 Means			Form 7 Means		
	Initial Test	Retest	Diff. (I-R)	Initial Test	Retest	Diff. (I-R)	Initial Test	Retest	Diff. (I-R)
Male Sample (N = 9273)									
	(N = 283)			(N = 4550)			(N = 4440)		
GI	10.223	10.558	-0.335	9.733	10.153	-0.420	10.210	9.790	+0.420
NO	31.933	34.470	-2.537	31.879	34.334	-2.455	32.613	34.271	-1.658
AD	14.512	15.261	-0.749	14.855	15.256	-0.401	14.427	15.358	-0.931
WK	20.021	20.830	-0.809	20.572	20.185	+0.387	20.734	20.103	+0.631
AR	12.827	13.074	-0.247	13.289	12.586	+0.703	12.879	12.867	+0.012
SP	11.495	13.223	-1.728	13.183	13.842	-0.659	13.982	13.075	+0.907
MK	12.721	12.548	+0.173	11.949	12.028	-0.079	11.920	11.864	+0.056
EI	19.975	20.781	-0.806	19.960	19.836	+0.124	20.337	19.580	+0.757
MC	11.873	12.276	-0.403	11.166	11.730	-0.564	11.190	11.338	-0.148
GS	11.784	12.078	-0.294	11.924	11.271	+0.653	11.289	11.403	-0.114
SI	13.498	14.898	-1.402	14.679	14.230	+0.449	14.009	14.527	-0.518
AI	10.862	12.813	-1.951	11.755	12.203	-0.448	12.173	11.990	+0.183
Total	181.724	192.809	-11.085	184.945	187.653	-2.707	185.763	186.166	-0.404
Sum of WK, AR, SP	44.343	47.127	-2.784	47.045	46.613	+0.432	47.595	46.045	+1.55
AFQT Percentile	54.721	58.488	-3.767	58.258	57.509	+0.748	59.207	56.501	+2.706
Female Sample (N = 1474) <sup>a</sup>									
	(N = 0)			(N = 796)			(N = 678)		
GI	--	--	--	7.048	8.068	-1.020	8.083	7.078	+1.005
NO	--	--	--	36.696	38.462	-1.766	37.428	37.873	-0.445
AD	--	--	--	16.211	16.097	+0.114	16.217	16.791	-0.547
WK	--	--	--	22.687	21.624	+1.063	25.513	22.535	+2.978
AR	--	--	--	13.126	12.195	+0.931	12.665	12.808	-0.143
SP	--	--	--	12.575	13.216	-0.641	13.822	12.640	+1.182
MK	--	--	--	12.959	12.742	+0.217	12.743	12.796	-0.053
EI	--	--	--	15.548	16.587	-1.039	17.198	15.836	+1.362
MC	--	--	--	8.737	8.945	-0.208	9.074	8.718	+0.356
GS	--	--	--	11.771	10.943	+0.828	11.106	11.708	-0.602
SI	--	--	--	9.648	9.960	-0.312	10.112	9.574	+0.538
AI	--	--	--	7.681	7.163	+0.518	7.301	7.614	-0.313
Total	--	--	--	174.687	176.003	-1.315	178.251	175.972	+2.279
Sum of WK, AR, SP				48.388	47.035	+1.353	48.990	47.984	+1.006
AFQT Percentile				60.550	58.349	+2.201	61.333	59.786	+1.547

<sup>a</sup>No women were initially tested using ASVAB Form 5.



Table 13

Comparison of Initial Test and Retest Navy Standard Scores (NSS)  
Means by Initial Test Form

ASVAB Subtest	Form 5 Means			Form 6 Means			Form 7 Means		
	Initial Test	Retest	Diff. (I-R)	Initial Test	Retest	Diff. (I-R)	Initial Test	Retest	Diff. (I-R)
Male Sample (N = 9273)									
	(N = 283)			(N = 4550)			(N = 4440)		
GI	52.184	52.827	-0.643	52.617	51.452	+1.165	51.434	52.202	-0.768
NO	50.643	52.322	-1.679	50.383	52.277	-1.894	50.647	52.583	-1.936
AD	51.502	51.028	+0.474	51.003	51.581	-0.578	49.168	52.380	-3.212
WK	53.145	53.283	-0.138	53.774	52.686	+1.088	53.068	53.185	-0.117
AR	53.286	51.982	+1.304	52.851	51.393	+1.458	51.552	52.317	-0.765
SP	50.576	52.682	-2.106	54.570	54.198	+0.372	54.077	54.020	+0.057
MK	53.240	54.025	-0.785	52.780	52.687	+0.093	52.855	52.337	+0.518
EI	54.272	54.958	-0.686	54.183	53.540	+0.643	54.149	53.665	+0.484
MC	53.792	53.049	+0.743	51.755	52.351	-0.586	50.832	52.272	-1.440
GS	52.774	53.837	-1.063	53.675	51.915	+1.760	52.112	52.276	-0.164
SI	51.869	54.484	-2.615	53.233	53.146	+0.087	52.599	53.269	-0.670
AI	49.809	53.926	-4.117	51.782	52.681	-0.899	52.709	52.160	+0.549
Total	627.092	638.403	-11.311	632.605	629.906	+2.699	625.201	632.665	-7.464
Sum of WK, AR, SP	157.007	157.947	+0.940	161.195	158.277	+2.918	158.697	159.522	-0.825
Female Sample (N = 1474) <sup>a</sup>									
	(N = 0)			(N = 796)			(N = 678)		
GI	—	—	—	45.118	44.888	+0.023	44.953	45.224	-0.271
NO	—	—	—	54.545	55.678	-1.133	54.763	55.661	-0.898
AD	—	—	—	54.038	53.111	+0.927	53.416	55.341	-1.925
WK	—	—	—	56.461	54.251	+2.210	55.282	56.270	-0.988
AR	—	—	—	52.597	50.373	+2.224	51.158	51.919	-0.761
SP	—	—	—	53.152	52.368	+0.784	53.699	53.159	+0.540
MK	—	—	—	54.621	54.544	+0.077	54.550	54.336	+0.214
EI	—	—	—	47.957	47.721	+0.236	48.732	48.329	+0.403
MC	—	—	—	46.740	46.325	+0.415	46.525	46.752	-0.227
GS	—	—	—	53.396	51.500	+1.896	51.848	53.201	-1.353
SI	—	—	—	43.629	44.163	-0.534	44.445	43.471	+0.974
AI	—	—	—	44.005	43.157	+0.848	43.487	43.824	-0.337
Total	—	—	—	606.259	598.080	+8.179	602.857	607.487	-4.630
Sum of WK, AR, SP				162.210	156.992	+5.218	160.139	161.348	-1.209

<sup>a</sup>No women were initially tested using ASVAB Form 5.

Table 14

Male Recruits Initially Qualified on  
School Guarantee Standard but Not on Retest  
By Initial Form

Initial Form	Sample 1 Men Initially Tested		Sample 2 Men From S1 Initially Qualified on School Guarantee Standard		Sample 3 Men From S2 Not Qualified on Retest	
	Number	Percent	Number	Percent	Number	Percent
5	283	3.052	210	74.2	55	26.2
6	4550	49.887	2640	58.0	692	26.2
7	4440	47.881	2314	52.1	471	20.4
Total	9273	100.00	5164	55.7	1218	23.6

### CONCLUSIONS

1. There is a tendency for scores on the tests most commonly used for selection and classification to show decrease on retest. Although this decrease is generally greater than would be expected solely on the basis of regression effects, this does not mean that initial testing practices are improper. Regression effects could account for part of the decrease, and other factors, such as change in motivation, could account for the remainder.

2. The initial test form can make a difference in the results. This fact suggests that the Navy standard score conversion tables (see appendix), which should equate test scores across forms, should be restandardized if necessary. These differences in results as a function of test form are in general the same as those found by Hodges (1979).

3. Some recruiting sources have a significantly higher than average proportion of recruits who fail to meet qualification standards on retest. The possibility that recruiting may be difficult or that the mental ability of the potential applicant population may be low in these areas should be considered in any follow-up investigation.

4. In deriving predicted mean retest scores, the present report used a random sample of applicants, rather than the AFQT standardization sample. This random applicant sample had higher test scores on the average than did the standardization sample, suggesting that the AFQT standardization sample may not have been appropriate.

### RECOMMENDATIONS

1. Since ASVAB Forms 5, 6, and 7 are no longer operational, further investigation of the AFQT percentile and Navy standard score conversion tables for these forms is not recommended at present.

2. ASVAB retesting should be continued with the new Forms 8, 9, and 10. These forms should be compared with earlier forms (ASVAB 5, 6, and 7) and then should be

monitored. The ASVAB retesting program should also monitor test results at the various recruiting stations for possible aberrations if future results continue to demonstrate discrepancies or test compromise.

**APPENDIX**  
**NAVY CONVERSION TABLES**

Table A-1

Table for Converting Armed Services Vocational Aptitude Battery (ASVAB) Subtest Raw Scores to Navy Standard Scores

Raw Score	General Information	Numerical Operations	Attention to Detail	Word Knowledge	Arithmetic Reasoning	Space Perception	Math Knowledge	Electronics Information	Mechanical Comprehension	General Science	Shop Information	Automotive Information	Raw Score
(GI)	(NO)	(AD)	(WK)	(AR)	(SP)	(MK)	(EI)	(MC)	(GS)	(SI)	(AI)		
50	66	--	--	--	--	--	--	--	--	--	--	--	50
49	65	--	--	--	--	--	--	--	--	--	--	--	49
48	64	--	--	--	--	--	--	--	--	--	--	--	48
47	63	--	--	--	--	--	--	--	--	--	--	--	47
46	62	--	--	--	--	--	--	--	--	--	--	--	46
45	62	--	--	--	--	--	--	--	--	--	--	--	45
44	61	--	--	--	--	--	--	--	--	--	--	--	44
43	60	--	--	--	--	--	--	--	--	--	--	--	43
42	60	--	--	--	--	--	--	--	--	--	--	--	42
41	59	--	--	--	--	--	--	--	--	--	--	--	41
40	57	--	--	--	--	--	--	--	--	--	--	--	40
39	57	--	--	--	--	--	--	--	--	--	--	--	39
38	56	--	--	--	--	--	--	--	--	--	--	--	38
37	55	--	--	--	--	--	--	--	--	--	--	--	37
36	54	--	--	--	--	--	--	--	--	--	--	--	36
35	53	--	--	--	--	--	--	--	--	--	--	--	35
34	52	--	--	--	--	--	--	--	--	--	--	--	34
33	52	--	--	--	--	--	--	--	--	--	--	--	33
32	51	--	--	--	--	--	--	--	--	--	--	--	32
31	50	--	--	--	--	--	--	--	--	--	--	--	31
30	49	73	69	--	--	--	73	30	--	--	--	--	30
29	48	73	65	--	--	--	69	29	--	--	--	--	29
28	48	73	64	--	--	--	66	28	--	--	--	--	28
27	46	73	63	--	--	--	64	27	--	--	--	--	27
26	46	73	60	--	--	--	63	26	--	--	--	--	26
25	44	70	60	--	--	--	62	25	--	--	--	--	25
24	44	70	58	--	--	--	60	24	--	--	--	--	24
23	43	69	57	--	--	--	58	23	--	--	--	--	23
22	42	68	55	--	--	--	57	22	--	--	--	--	22
21	41	66	54	--	--	--	56	21	--	--	--	--	21
20	40	64	53	69	68	66	54	73	73	69	70	70	20
19	39	63	52	65	65	64	53	69	69	64	65	65	19
18	39	60	50	63	63	62	52	65	66	61	62	62	18
17	38	58	49	62	61	60	50	63	64	59	60	60	17
16	37	56	48	60	60	58	48	61	63	56	59	59	16
15	35	53	47	58	58	56	47	60	60	54	57	57	15
14	34	50	46	56	56	55	46	58	58	52	56	56	14
13	32	48	44	54	55	54	44	57	56	51	54	54	13
12	32	46	43	52	53	52	43	54	54	49	53	53	12
11	31	43	42	50	50	52	42	53	52	47	51	51	11
10	31	40	40	48	48	50	40	50	49	46	49	49	10
9	31	39	38	46	46	48	38	49	47	43	48	48	9
8	31	36	37	43	44	47	35	47	44	40	46	46	8
7	30	32	34	39	40	44	34	44	41	38	44	44	7
6	30	31	32	35	38	42	32	42	38	35	40	40	6
5	30	31	31	31	34	39	31	38	34	32	37	37	5
4	30	30	31	30	31	34	31	34	32	31	34	34	4
3	30	27	30	27	31	31	27	31	30	30	31	31	3
2	30	27	27	27	30	30	27	27	27	27	30	30	2
1	27	27	27	27	27	27	27	27	27	27	30	30	1
0	27	27	27	27	27	27	27	27	27	27	27	27	0

ASVAB Form 5

Table A-1 (Continued)

Raw Score	General Information	Numerical Operations	Attention to Detail	Word Knowledge	Arithmetic Reasoning	Space Perception	Math Knowledge	Electronics Information	Mechanical Comprehension	General Science	Shop Information	Automotive Information	Raw Score
(GI)	(NO)	(AD)	(WK)	(AR)	(SP)	(MK)	(EI)	(MC)	(GS)	(SI)	(AI)		
50	69	--	--	--	--	--	--	--	--	--	--	--	50
49	66	--	--	--	--	--	--	--	--	--	--	--	49
48	64	--	--	--	--	--	--	--	--	--	--	--	48
47	64	--	--	--	--	--	--	--	--	--	--	--	47
46	63	--	--	--	--	--	--	--	--	--	--	--	46
45	61	--	--	--	--	--	--	--	--	--	--	--	45
44	60	--	--	--	--	--	--	--	--	--	--	--	44
43	60	--	--	--	--	--	--	--	--	--	--	--	43
42	59	--	--	--	--	--	--	--	--	--	--	--	42
41	58	--	--	--	--	--	--	--	--	--	--	--	41
40	57	--	--	--	--	--	--	--	--	--	--	--	40
39	56	--	--	--	--	--	--	--	--	--	--	--	39
38	55	--	--	--	--	--	--	--	--	--	--	--	38
37	54	--	--	--	--	--	--	--	--	--	--	--	37
36	54	--	--	--	--	--	--	--	--	--	--	--	36
35	53	--	--	--	--	--	--	--	--	--	--	--	35
34	52	--	--	--	--	--	--	--	--	--	--	--	34
33	51	--	--	--	--	--	--	--	--	--	--	--	33
32	50	--	--	--	--	--	--	--	--	--	--	--	32
31	49	--	--	--	--	--	--	--	--	--	--	--	31
30	48	73	68	--	--	--	73	--	--	--	--	--	30
29	48	73	66	--	--	--	69	--	--	--	--	--	29
28	47	73	63	--	--	--	66	--	--	--	--	--	28
27	46	73	61	--	--	--	65	--	--	--	--	--	27
26	46	73	60	--	--	--	63	--	--	--	--	--	26
25	44	73	58	--	--	--	61	--	--	--	--	--	25
24	44	70	57	--	--	--	60	--	--	--	--	--	24
23	43	69	56	--	--	--	58	--	--	--	--	--	23
22	42	66	55	--	--	--	56	--	--	--	--	--	22
21	42	66	54	--	--	--	55	--	--	--	--	--	21
20	41	62	53	69	73	69	54	73	73	69	69	69	20
19	40	60	52	65	70	65	53	69	70	64	66	66	19
18	39	58	52	61	66	62	52	66	69	60	63	63	18
17	39	56	50	59	63	60	50	62	66	56	60	60	17
16	39	54	49	57	60	59	49	60	62	54	59	59	16
15	38	52	47	55	58	58	47	59	60	53	57	57	15
14	36	49	46	54	56	56	46	57	58	52	55	55	14
13	35	47	44	53	54	55	44	56	56	49	64	64	13
12	35	44	43	51	52	53	43	54	54	48	53	53	12
11	34	42	41	49	50	53	42	52	52	46	51	51	11
10	34	39	39	47	48	50	40	50	50	45	50	50	10
9	34	37	37	45	45	49	39	48	48	43	48	48	9
8	32	36	36	43	43	47	36	46	46	41	46	46	8
7	32	35	34	40	40	44	34	43	42	39	43	43	7
6	32	34	31	36	36	41	32	40	40	36	40	40	6
5	31	32	31	34	34	39	31	39	35	34	37	37	5
4	31	31	30	32	32	35	30	34	32	32	34	34	4
3	31	31	27	30	31	32	30	34	31	31	32	32	3
2	31	30	27	27	27	31	27	31	31	30	30	30	2
1	30	27	27	27	27	27	27	30	30	30	30	30	1
0	27	27	27	27	27	27	27	27	27	27	27	27	0

ASVAB Form 6

Table A-1 (Continued)

Raw Score	ASVAB Form 7										Automotive Information Score		
	(GI)	(NO)	(AD)	(WK)	(AR)	(SP)	(MK)	(EI)	(MC)	(GS)	(SI)	(AI)	
50	--	68	--	--	--	--	--	--	--	--	--	--	50
49	--	65	--	--	--	--	--	--	--	--	--	--	49
48	--	63	--	--	--	--	--	--	--	--	--	--	48
47	--	62	--	--	--	--	--	--	--	--	--	--	47
46	--	61	--	--	--	--	--	--	--	--	--	--	46
45	--	60	--	--	--	--	--	--	--	--	--	--	45
44	--	60	--	--	--	--	--	--	--	--	--	--	44
43	--	59	--	--	--	--	--	--	--	--	--	--	43
42	--	58	--	--	--	--	--	--	--	--	--	--	42
41	--	58	--	--	--	--	--	--	--	--	--	--	41
40	--	57	--	--	--	--	--	--	--	--	--	--	40
39	--	56	--	--	--	--	--	--	--	--	--	--	39
38	--	56	--	--	--	--	--	--	--	--	--	--	38
37	--	55	--	--	--	--	--	--	--	--	--	--	37
36	--	54	--	--	--	--	--	--	--	--	--	--	36
35	--	53	--	--	--	--	--	--	--	--	--	--	35
34	--	52	--	--	--	--	--	--	--	--	--	--	34
33	--	52	--	--	--	--	--	--	--	--	--	--	33
32	--	50	--	--	--	--	--	--	--	--	--	--	32
31	--	49	--	--	--	--	--	--	--	--	--	--	31
30	--	48	73	68	--	--	--	73	--	--	--	--	30
29	--	48	73	64	--	--	--	70	--	--	--	--	29
28	--	47	73	62	--	--	--	66	--	--	--	--	28
27	--	46	73	61	--	--	--	66	--	--	--	--	27
26	--	45	73	59	--	--	--	64	--	--	--	--	26
25	--	44	70	57	--	--	--	62	--	--	--	--	25
24	--	43	69	57	--	--	--	60	--	--	--	--	24
23	--	42	66	55	--	--	--	59	--	--	--	--	23
22	--	41	66	54	--	--	--	57	--	--	--	--	22
21	--	40	64	53	--	--	--	55	--	--	--	--	21
20	--	39	63	52	66	70	69	54	73	73	69	69	20
19	--	38	61	52	64	65	66	52	70	69	65	65	19
18	--	37	58	50	61	62	64	50	64	66	61	63	18
17	--	37	56	49	59	60	61	48	62	64	59	61	17
16	--	36	54	47	57	58	60	47	60	62	56	59	16
15	69	35	51	46	54	56	58	44	58	60	54	57	15
14	64	34	48	45	53	54	57	43	56	58	52	55	14
13	60	34	46	44	51	52	56	42	54	56	50	54	13
12	56	34	43	43	50	50	54	39	50	52	48	52	12
11	53	32	40	41	48	48	53	39	50	52	46	52	11
10	51	32	37	39	47	46	50	37	49	50	44	50	10
9	48	31	35	38	46	44	48	36	47	48	43	48	9
8	44	31	34	36	44	41	46	34	46	45	41	46	8
7	42	31	32	34	41	38	42	32	44	42	38	44	7
6	39	30	31	32	37	35	39	31	40	39	36	41	6
5	36	27	31	31	34	34	35	30	36	37	34	38	5
4	32	27	31	31	31	31	32	30	32	34	31	35	4
3	31	27	30	30	30	31	31	30	31	32	30	32	3
2	30	27	27	27	27	30	30	27	30	31	30	31	2
1	27	27	27	27	27	27	27	27	27	31	27	30	1
0	27	27	27	27	27	27	27	27	27	30	27	27	0

Table A-2

Table for Converting Armed Forces Qualification Test  
(WK+AR+SP) Raw Scores to Percentiles

Raw Score	Percentile	Raw Score	Percentile	Raw Score	Percentile
ASVAB Form 5					
70	99	50	64	30	29
69	98	49	62	29	26
68	97	48	60	28	23
67	96	47	58	27	20
66	95	46	56	26	16
65	94	45	55	25	13
64	93	44	53	24	11
63	91	43	51	23	10
62	89	42	50	22	8
61	87	41	49	21	7
60	84	40	48	20	6
59	81	39	47	19	5
58	79	38	46	18	5
57	77	37	44	17	4
56	75	36	42	16	4
55	73	35	40	15	3
54	71	34	38	14	3
53	69	33	36	13	2
52	67	32	34	12	2
51	66	31	31	0-11	1



Table A-2 (Continued)

Table for Converting Armed Forces Qualification Test  
(WK+AR+SP) Raw Scores to Percentiles

Raw Score	Percentile	Raw Score	Percentile	Raw Score	Percentile
ASVAB Forms 6 and 7					
70	99	50	62	30	28
69	98	49	60	29	25
68	97	48	58	28	21
67	96	47	56	27	19
66	95	46	55	26	16
65	94	45	54	25	13
64	93	44	52	24	11
63	91	43	50	23	10
62	89	42	49	22	8
61	86	41	48	21	7
60	83	40	47	20	6
59	80	39	46	19	5
58	77	38	45	18	5
57	75	37	43	17	4
56	73	36	41	16	4
55	71	35	39	15	3
54	69	34	37	14	3
53	67	33	35	13	2
52	65	32	33	12	2
51	64	31	31	0-11	1

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